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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,691	10/12/2001	Edwin Colby Little		2138

7590  
Edwin Little  
917 Shetland Ct.  
Windsor, CO 80550

01/22/2004

EXAMINER

WOO, ISAAC M

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/976,691

**Applicant(s)**

LITTLE, EDWIN COLBY

**Examiner**

Isaac M Woo

**Art Unit**

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9 and 10 is/are rejected.
- 7) ☒ Claim(s) 6 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moricz et al (U.S. Patent No. 6,411,950, hereinafter, Moricz) in view of Sako et al (U.S. Patent No. 6,442,540, hereinafter, "Sako").

With respect to claim 1, Moricz discloses, method of enhancing user input (search query) to improve discovery, (by refining search query, col. 2, lines 19-34), analyzing the terminology usage within the database (searching database, col. 3, lines 23-40) to identify core vocabulary, see (col. 3, lines 23-40); receiving a search query from a user, the search query including at least one query term, see (400, fig. 4, col. 5, lines 40-50); supplementing the search query with semantic data associated with the input query term(s), see (fig. 5, col. 6, lines 15-25); identifying database descriptions that are conceptually similar to the input, see (fig. 5, col. 6, lines 15-25); presenting the similar entries to the user for subjective selection; presenting the similar entries to the

user for subjective selection, see (fig. 5, col. 6, lines 15-25); ranking identified the description based on their similarity to the input, see (fig. 5, col. 6, lines 15-25, Moricz discloses, the presentation displays the lists of refinement that are similar with the user's query, "Step 460, Depending on the number of possible refinements. The list may also be arranged in a variety of ways, such as according to the query frequency of each refinement in the list. Thus, for certain queries, the displayed refinement list may only be twenty (20) refinements with the highest query frequency", see (col. 5, lines 40-63). This teaches that the similar query list is displayed according to query frequency, which is displaying based on ranking (frequency)). Moricz does not explicitly disclose, assisting in the identification of the predominate semantic structure recording the conceptual assignment, supplementary terms and contextual significance of the core vocabulary. This limitation means, based on semantic structure of identified core vocabulary or key word, additionally assigning conceptual, and supplemental terms to the core vocabulary. However, Sako discloses, extracting keyword (identifying core vocabulary, for instance, director, fig. 17), see (fig. 5, col. 5, lines 29-45), and discloses, assigning conceptual, and supplemental terms to the core vocabulary, see (fig. 22, fig. 29-32, col. 15, lines 56-67, col. 16, lines 58-67 to col. 17, lines 1-14, for example, pop up shows the conceptual, and supplemental terms for vocabulary of "director"). Therefore, it would have been obvious to a person having ordinary skill in the art the time of the invention was made to include assisting in the identification of the predominate semantic structure recording the conceptual assignment, supplementary terms and contextual significance of the core vocabulary in the system of Moricz to provide core vocabulary's conceptual, and

supplemental terms by semantic analysis. Because semantic analysis provides additional and similar meaning for the core vocabulary, which provides improved data search in data retrieval system.

With respect to claim 2, Moricz discloses, generating a data structure which links key terms to other terms related to them within the context of the database as well as their contextual significance, based on their predominate semantic usage, and accessing the data structure to add the related terms and their contextual significance to the query criteria, see (fig. 3, fig. 5, col. 3, lines 40-67 to col. 4, lines 1-67 to col. 5, lines 1-39).

With respect to claim 3, Moricz discloses, creating a frequency distribution analysis of the words used in the database descriptions; and rank ordering the words in descending order of usage; and identifying the word where the second derivative of individual usage with respect to the cumulative number of words analyzed reaches its first local minimum, and identifying the set of words, from most used to the word identified in (a3), which compose the core vocabulary of the database, see (fig. 3, fig. 5, col. 3, lines 40-67 to col. 4, lines 1-67 to col. 5, lines 1-39, user reviewing similar query list after displaying similar query list is the manual step).

With respect to claim 4, Moricz discloses, presenting a statistically valid sample of descriptions that contain the word for manual review; and presenting a template of

common conceptual groupings for manual review; and manually identifying and recording a list of the conceptual groupings that predominate the semantic structure of the database descriptions and assigning an importance level to each grouping, see (fig. 3, fig. 5, col. 3, lines 40-67 to col. 4, lines 1-67 to col. 5, lines 1-39).

With respect to claim 5, Moricz discloses, for each term in the core vocabulary, presenting a statistically valid sample of its citations for manual review; and presenting the list of conceptual groupings developed in step for manual review, and manually assigning the term to a conceptual grouping, see (col. 2, lines 19-63, fig. 3, fig. 5, col. 3, lines 40-67 to col. 4, lines 1-67 to col. 5, lines 1-39).

With respect to claim 7, Moricz discloses, generating a similarity index for each database description based on the query term(s) and their associated semantic data, see (fig. 3, fig. 5, col. 3, lines 40-67 to col. 4, lines 1-67 to col. 5, lines 1-39).

With respect to claim 9, Moricz discloses, identifying for output entries that have a positive similarity index, see (col. 2, lines 35-63).

With respect to claim 10, Moricz discloses, rank ordering entries prepared for output based on their similarity indices presenting output data to the user in descending order of similarity index, see (col. 5, lines 40-67 to col. 6, lines 1-25).

***Allowable Subject Matter***

3. Claims 6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Woods (U.S. Patent No. 6,282,538) discloses system for generating responses to queries to a document retrieval system. The system responds to a specific request for information by locating and ranking portions of text that may contain the information sought. It locates small relevant passages of text (called "hit passages") and ranks them according to an estimate of the degree to which they correspond to the information sought. The system minimizes the number of these hit passages that need to be examined before an information seeker has either found the desired information or can safely conclude that the information sought is not in the collection of texts.

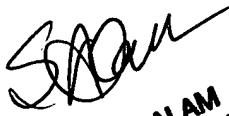
**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M Woo whose telephone number is (703) 305-0081. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

IMW  
January 7, 2004

  
SHAHID ALAM  
PRIMARY EXAMINER